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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,427	02/05/2002	Michael Overdick	DE010033	7860
24737	7590	10/28/2003	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			SUNG, CHRISTINE	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,427

Applicant(s)

OVERDICK ET AL.

Examiner

Christine Sung

Art Unit

2878

new

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 8 is/are allowed.
- 6) ☐ Claim(s) 1-7, 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because the figure does not include appropriate labels to make the drawing useful, i.e. empty boxes are not accepted. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Valenta (US Patent 4,528,450).

Regarding claims 1 and 10, Valenta discloses a detection apparatus that includes:

At least one conversion unit (Figure 3, element 12) for the absorption of radiation while generating an electric charge signal (element 18) which correspond to the absorbed energy,

At least one evaluation unit (elements 22 and 32) for processing said charge signal in a counting channel (element 22), whose counter output (element 44) presents a measure of the number of charge signals or counts (Column 4, lines 50-53) detected since a beginning of measurement as well as, in parallel therewith (see column 4, line 8-13), in an integrator channel (element 32) whose integrator output (element 50) presents a measure of the overall charge of the charge signals detected since a beginning of measurement ,

At least one data processing unit (element 46) which processes the signals from the counter output (element 44) and from the integrator output (50) in combination so as to determine the absorbed quantity of radiation.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valenta (US Patent 4,528,450).

Regarding claim 4, the limitations set forth in claim 1 have been disclosed in the abovementioned paragraphs. However, Valenta does not disclose the specifics of the processing method, but states that the data will undergo a process for proper data analysis (see column 4, lines 53-58). It is well known in the art to analyze a given set of data using averaging techniques in order to smooth out erroneous data or to obtain a general understanding of the data collected.

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Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have taken the set of data produced by the invention disclosed by Valenta and average the signals.

Regarding claim 6, the limitations set forth in claim 1 have been disclosed in the abovementioned paragraphs. Valenta discloses the claimed invention except for using a plurality of conversion units in the form of a matrix. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included a plurality of the conversion elements as disclosed by Valenta, since it is well known in the art to use an array of detector elements (the pixels in a matrix form) for radiation detection and since it has been held that mere duplication of the essential working parts of device involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.*, 549 F.2d 833, 193 USPQ 8(CA 71977).

Regarding claim 7, Valenta discloses the limitations set forth in claim 6, but does not specify that all the units be formed upon a common substrate. It is well known in the art that elements of a single device are all placed upon a common substrate so as to minimize the introduction of mechanical errors due to handling, misalignment, etc. Therefore, since Valenta discloses all of the necessary elements of a single evaluation and data processing unit, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included all of the units onto a single common substrate, as it is common practice in the industry.

7. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valenta (US Patent 4,528,450) in view of Farmer (US Patent 3,646,347).

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Valenta discloses the limitations set forth in claim 1 but does not specifically disclose the weighting of particular signals from the counter or integrator output during certain conditions. Farmer, however discloses a converter responsible for weighting the counts in accordance with a pulse-height-dose function in order to eliminate the signals that are merely noise signals (see claim 1). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the use of a weighting factor to weigh low/high absorption situations in order to generate a data set with greater accuracy.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valenta (US Patent 4,528,450) in view of Modlin (US Patent 6,498,335).

Regarding claim 5, Valenta discloses the limitations set forth in claim 1, but does not specify the use of an input amplifier that amplifies and conducts signal to the counting and integrator channel. Modlin discloses the use of an input amplifier (Figure 10, element 312) between an integrator and counter channels. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the input amplifier with the invention as claimed by Valenta in order to be able to easily distinguish between noise signals and true radiation signals. The amplifier will magnify the signals generated by both the noise and radiation, and when the signal reaches the counter or integrator channels, the amplified signals will aide the respective channels in distinguishing the validity of the pulse.

Allowable Subject Matter

9. Claim 8 is allowed.

10. The following is a statement of reasons for the indication of allowable subject matter:

Although Valenta discloses some of the steps and all of the elements required in the present invention, none of the prior art of record discloses the specific method of evaluating absorption signals as disclosed in the present invention; namely that after the mean absorption energy is determined in a given time interval, it is then compared to the original spectrum of the x-ray source.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. US Patent 4,087,692- this reference discloses a radiation detection device with a counter and integrator elements in series.

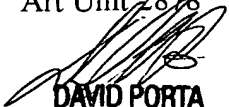
b. US Pre Grant Publication 2003/0053587- this reference discloses an integrator and counter element in series.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 703-305-0382. The examiner can normally be reached on Monday- Friday 7-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Christine Sung
Examiner
Art Unit 2878


DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

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